

CLAIMS

1. In a seal ring including a first seal portion which seals a sidewall surface of an annular groove on a unsealed fluid side A, the annular groove being provided in one of two members that are concentrically assembled so as to be relatively rotatable; and a second seal portion which seals a surface of the other of the two members;

wherein an annular interspace between the two members is sealed by the seal portions; and

a ring body of the seal ring is provided with a separation portion which is separated in one place in a circumferential direction of the seal ring;

a seal ring characterized in that said first seal portion is provided with linear contact portions which come into linear contact with the sidewall surface of the annular groove on the unsealed fluid side, so as to extend continuously over a whole circumference of the seal ring from one side of said separation portion to the other side thereof; and

that said linear contact portion which is provided on one side of said separation portion, and said linear contact portion which is provided on the other side of said separation portion are located at a distance in a diametric direction of the seal ring.

2. A seal ring as defined in claim 1, characterized in that said linear contact portion provided on one side of said separation portion, and said linear contact portion provided on the other side of said separation portion have regions which are placed one over the other when said linear contact portions are projected in the

diametric direction.

3. A seal ring as defined in claim 1 or claim 2, characterized in that a quantity of leakage is adjusted by a size of a sectional area of a section of a space in the diametric direction, the space being formed by said linear contact portion provided on one side of said separation portion, said linear contact portion provided on the other side of said separation portion, a part of the ring body as lies between said linear contact portion provided on one side and said linear contact portion provided on the other side, and the sidewall surface of the annular groove on the unsealed fluid side.

4. A seal ring as defined in any of claim 1 - claim 3, characterized in that said linear contact portions define substantially mountain shaped portion shaped portions which protrude from a side surface of the ring body, toward the sidewall surface of the annular groove on the unsealed fluid side.

5. A seal ring as defined in any of claim 1 - claim 4, characterized in that said linear contact portion provided on one side of said separation portion is located nearer a side of said other member than said linear contact portion provided on the other side of said separation portion; and

that said one member is assembled so as to rotate from said other side toward said one side through separation end parts which is end parts of said separation portion.

6. A seal ring as defined in claim 5, characterized in that, on the other member side of the ring body, the separation end part of said one side which is provided with said linear contact portion

is provided with a first circularly-arcuate protrusive part which protrudes in the circumferential direction, while the separation end part of said other side is provided with a first circularly-arcuate recessed part which is fitted with said first circularly-arcuate protrusive part; and

that said first circularly-arcuate protrusive part is provided with a second circularly-arcuate protrusive part which protrudes in the circumferential direction, while said first circularly-arcuate recessed part is provided with a second circularly-arcuate recessed part which is fitted with said second circularly-arcuate protrusive part.

7. A seal ring as defined in claim 6, characterized in that one of respective fitting surfaces at which said second circularly-arcuate protrusive part and said second circularly-arcuate recessed part are fitted is provided with a protrusion which comes into linear contact with the other fitting surface.

8. A seal ring as defined in any of claim 1 - claim 4, characterized in that the separation end part of said one side of said separation portion is provided with a circularly-arcuate protrusive part which protrudes in the circumferential direction, while the separation end part of said other side of said separation portion is provided with a circularly-arcuate recessed part which is fitted with said circularly-arcuate protrusive part; and

that one of respective fitting surfaces at which said circularly-arcuate protrusive part and said circularly-arcuate recessed part are fitted is provided with a protrusion which comes

into linear contact with the other fitting surface.

9. A seal ring as defined in claim 8, characterized in that the fitting surfaces are surfaces which are substantially perpendicular to an axis of said seal ring, and which extend in the circumferential direction.

10. A seal ring as defined in any of claim 1 - claim 9, characterized in that said linear contact portions include:

    a first linear contact portion which is extended continuously from one side of said separation portion to the other side thereof, and which comes into linear contact with the sidewall surface of the annular groove on the unsealed fluid side; and

    a second linear contact portion which lies nearer a groove bottom side of the annular groove than said first linear contact portion, which is extended continuously from one side of said separation portion to the other side thereof, and which comes into linear contact with the sidewall surface of the annular groove on the unsealed fluid side;

    wherein said linear contact portion provided on one side of said separation portion is said first linear contact portion, while said linear contact portion provided on the other side of said separation portion is said second linear contact portion.